

Hierarchical Task Analysis and Its Types:

The term “task” is a piece of work or goal to be undertaken by someone. But task analysis often results in a hierarchical representation of what steps it takes to perform a task for which there is a goal or interaction among humans and machines. So task analysis techniques support user-centred design.

Cognitive task analysis(CTA) is applied to IA(Information Architecture) for situation assessment, decision making, and response planning and execution, in this result we get hierarchical task analysis (HTA). Task description is a necessary precursor(successor) for other analysis techniques, including critical path analysis (CPA), UX critical research and UX flow. So HTA is a structured, objective approach to describing user’s performance for tasks.

“HTA” describes the interactions between a user and a software system. When designing a new system, hierarchical task analysis lets you explore various possible approaches to completing the same task. HTA’s have a strict hierarchical structure with the primary goal(s) represented at the top. A hierarchical task analysis (HTA) describes an activity in terms of its specific goals, subgoals, operations, decision making and planning. Once the analysis is complete, the task activity is described in detail.

Below is a breakdown of what we are going to cover in this article.

- 1) Definitions
- 2) HTA Applicable In
- 3) How to create HTA?
- 4) HTA Organizing hierarchy
- 5) Benefits of HTA
- 6) HTA History
- 7) Conclusion

Hierarchical Task Analysis(HTA)



List HTA

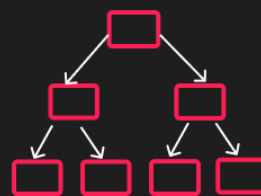


Diagram HTA

Defination 1: Hierarchical task analysis provides an understanding of the tasks users need to perform for achieving certain goals. You can break down these tasks into multiple levels of subtasks.

Defination 2: A hierarchical task analysis (HTA) provides an understanding of the steps taken by users to achieve a certain goal. It is a structured, objective approach in which we have to breakdown a task in sub-tasks.

Example: For example login into an account is a task and enter email, password and click to the sign-in button are subtasks.

HTA Applicable In: HTA is applicable across a range of different domains. It useful in application designing, medical field research, detection, process control (e.g. nuclear power plants), education, aviation, and medicine, construct a processor planning, concluding time-and-motion, and training. In the end, I (Muhammad Nawaz Rizvi) can say it useful across nearly any domain.

How to create HTA?

HTA Knowing how to do task analysis is a fundamental skill in UX. It is a way of decomposition and construction of a map (Planning) and decision making. There are a few main steps in writing a hierarchical task analysis.

- 1) First of all you have to know your audience (Understanding of users).
- 2) Before HTA there should be IA(Information Architecture).
- 3) Identify variables(functionalities) and major tasks of each page described in IA.
- 4) Try to extract each task of a single page.
- 5) Start decision making for a specific goal or task.
- 6) Breakdown or decompose a task in sub-tasks.
- 7) Sub-goals should be further broken down into additional sub-goals, continue this process until you reach an appropriate operation.
- 8) Pay particular attention to areas such as operating system(OS) App's Elements, interactions.
- 9) Organizing the hierarchy.

HTA Organising Hierarchy:

Each level in the HTA should be numbered according to its hierarchical level, The overall goal is the highest hierarchical level and should be numbered 1. So the first sub-goal in the hierarchy will be 1.1. Further, just extend this system hierarchy to level:1.1.1 and the next hierarchical level will be: 1.1.1.1, and so on.

An HTA can be represented in list or diagram form as well as in In diagram form. In the list, form lines should be indented to denote the different hierarchical levels. So in diagram form each operation should be placed within a box and links should be made between them: a lower hierarchical level should branch from underneath a higher-level operation.

Real Examples For HTA

- 1: SignIn
- 1.1: Enter Email
- 1.2: Enter Password
 - 1.2.1: Show Password
 - 1.2.2: Hide Password
- 1.3: Forget Password?
- 1.4: Remember me
- 1.5: Click on Login button
- 1.6: Already have an account

List HTA



Diagram HTA

Benefits of HTA:

A hierarchical task analysis directly has effects on the system's cost, System reliability, efficiency, effectiveness, or safety, So HTA is very important for any system.

- 1) It lets you objectively compare different approaches to the supporting same task.
- 2) HTA enables effective UX design because designers can understand how a system works.
- 3) It supports UX design reuse.
- 4) Hierarchical task analysis lets you capture multiple implementations of design patterns and identify new design patterns.
- 5) HTA provide critical path analysis.
- 6) It provides extensive information about a task.
- 7) HTA Helpful in error analysis.
- 8) Evaluate systems against usability or functional requirements.
- 9) Creates an output and Measure learnability.
- 10) Forming hypotheses for solving problems.

HTA History:

HTA's history is as old as human in the world. Muslim scholars have been using IA and HTA techniques for fourteen hundred years in genealogy (birth record) and in "Fatwa" or books writings. (Muhammad Nawaz Rizvi).

But in application designing, task analysis and psychological science the concept of HTA given by John Annett & Keith Duncan in 1967.

Conclusion:

In conclusion this blog for spreading some of my thoughts and research about HTA. However, I hope you enjoyed reading this blog post as a newbie as well as an experienced "UXer". I hope this article will be

helpful for beginners and experts. This article takes you one step ahead in the UI/UX field. If you like it please comments on and share it with your friends. If you need UI/UX services to let us direct contact or by Upwork. Stay in touch with Linkedin, Facebook, Pinterest, Dribbble, Behance, Instagram and Upwork.

Now you know all about HTA, you may be interested in more articles for this please visit our site.
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